

CLAIMS

19. (Currently amended.) A wiring board, comprising:
a board of at least one layer comprising a conductor part, said conductor part comprising signal line conductor patterns and having a ground part that is either a ground surface or has ground patterns deployed on one surface of said board, an entire surface of said ground part being covered with a magnetic thin film, wherein said magnetic thin film is configured of a magnetic loss material represented by M-X-Y, where M is at least one of Fe, Co, and Ni, Y is at least one of F, N, and O, and X is at least one element other than M or Y, said magnetic loss material has a maximum value μ''_{\max} of loss factor μ'' that is imaginary component in complex permeability of said magnetic loss material existing within a frequency range of 100 MHz to 10 GHz; and
said magnetic thin film[[s]] deployed at least on part of said board or said conductor part.

22. (Cancelled.)

23. (Currently amended.) The wiring board according to ~~claim 22~~ claim 19, wherein said magnetic thin film is formed on said signal line conductor patterns.

24. (Currently amended.) The wiring board according to ~~claim 22~~ claim 19, wherein said magnetic thin films are formed so as to be separated from signal line conductor patterns in portion where said signal line conductor patterns are not formed.

25. (Currently amended.) The wiring board according to ~~claim 22~~ claim 19, wherein said magnetic thin film is deployed with an insulation layer interposed therebetween so as to cover said conductor patterns.

26. (Currently amended.) The wiring board according to claim 22 claim 19, wherein said magnetic thin film is fabricated by at least one method of sputtering and vapor deposition.

27. (Currently amended.) The wiring board according to claim 22 claim 19, wherein said magnetic thin film has a thickness within a range of 0.3 μ m to 20 μ m.

28. (Currently amended.) The wiring board according to claim 22 claim 19, wherein said wiring board is a multilayer printed wiring board comprising a structure of at least 3 layers.

29. (Currently amended.) The wiring board according to claim 22 claim 19, wherein said magnetic thin film is configured of a magnetic loss material represented by M-X-Y, where M is at least one of Fe, Co, and Ni, Y is at least one of F, N, and O, and X is at least one element other than M or Y, said magnetic loss material is a broad-band magnetic loss material in which maximum value μ''_{\max} of loss factor μ'' that is imaginary component in complex permeability of said magnetic loss material exists within a frequency range of 100 MHz to 10 GHz, and is a broad-band magnetic loss material having a relative bandwidth bwr [[is]] not smaller than 150% where the relative bandwidth bwr is obtained by extracting a frequency bandwidth between two frequencies at which the value of μ'' is 50% of the maximum μ''_{\max} and normalizing the frequency bandwidth at the center frequency thereof.

30. (Currently amended.) The wiring board according to claim 29 claim 19, wherein size of saturation magnetization in said magnetic loss material is within a range of 60% to 35% of saturation magnetization of a metal magnetic body consisting solely of M component.

31. (Currently amended.) The wiring board according to ~~claim 19~~ claim 29, wherein said magnetic loss material exhibits a DC electrical resistivity having a value larger than 500 $\mu\Omega\cdot\text{cm}$.

32. (Currently amended.) The wiring board according to ~~claim 22~~ claim 19, wherein said magnetic thin film is configured of a magnetic loss material having a composition represented by ~~M-X-Y~~, where ~~M~~ is at least one of Fe, Co, and Ni, ~~Y~~ is at least one of F, N, and O, and ~~X~~ is at least one element other than ~~M~~ or ~~Y~~, said magnetic loss material is a narrow-band magnetic loss material in which maximum value μ''_{\max} of loss factor μ'' that is imaginary component in complex permeability of said magnetic loss material exists within a frequency range of 100 MHz to 10 GHz, and magnetic loss material is a narrow-band magnetic loss material having a relative bandwidth bwr [[is]] not greater than 200% where the relative bandwidth bwr is obtained by extracting a frequency bandwidth between two frequencies at which the value of μ'' is 50% of the maximum μ''_{\max} and normalizing the frequency bandwidth at the center frequency thereof.

33. (Currently amended.) The wiring board according to ~~claim 32~~ claim 19, wherein size of saturation magnetization in said magnetic loss material is within a range of 80% to 60% of saturation magnetization of a metal magnetic body consisting solely of ~~M~~ component.

34. (Original.) The wiring board according to claim 32, wherein said magnetic loss material exhibits a DC electrical resistivity that is within a range of 100 $\mu\Omega\cdot\text{cm}$ to 700 $\mu\Omega\cdot\text{cm}$.

35. (Currently amended.) The wiring board according to ~~claim 32~~ claim 19, wherein ~~X~~ component of said magnetic thin film is at least one of C, B, Si, Al, Mg, Ti, Zn, Hf, Sr, Nb, Ta, and rare earth elements.

36. (Currently amended.) The wiring board according to ~~claim 32~~ claim 19, wherein, in said magnetic loss material, said M exists in a granular form dispersed in matrix of said X-Y compound.

37. (Currently amended.) The wiring board according to ~~claim 32~~ claim 36, wherein mean particle diameter of particles M having said granular form is within range of 1 nm to 40 nm.

38. (Currently amended.) The wiring board according to ~~claim 32~~ claim 19, wherein said magnetic loss material exhibits an anisotropic magnetic field H_k of 600 Oe (5.34×10^4 A/m) or less.

39. (Currently amended.) The wiring board according to ~~claim 32~~ claim 19, wherein said magnetic loss material is selected from $Fe_{\alpha}Al_{\beta}O_{\gamma}$ and $Fe_{\alpha}Si_{\beta}O_{\gamma}$.